

REMARKS/ARGUMENTS

Claim 22 has been canceled hereby. Claims 1, 3-6, 8, 9, 11-21 and 23-29 are pending herein.

Claims 1, 3-6, 8, 9 and 11-16 were rejected under 35 U.S.C. §112, first paragraph. The Office Action contains a statement that the recitation that the front frame surface and back frame surface each have a length which is a multiple of a length of a standard roofing tile, the multiple being an integer of at least two, is not supported by the original disclosure. The Applicants respectfully disagree. For example, the original specification, page 3, lines 15-20 disclose that “. . . the width of the frame . . . is a multiple of the width of the roofing tile, so that each photovoltaic element can be mounted so as to occupy an area where one or more roofing tiles would fit . . .”. The situation where *more than one* roofing tile would fit in the area occupied by each photovoltaic element is precisely the subject matter being claimed. In view of the above, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

Claims 1, 3-6, 8 and 9 were rejected under 35 U.S.C. §103(a) over WO 00/30184 (WO ‘184) in view of U.S. Patent Publication No. 2004/0031518 (Plantfeber ‘518).

The Office Action contains an acknowledgment that WO ‘184 does not disclose tiles which have a length which is a multiple of a length of a standard roofing tile, the multiple being an integer of at least two.

Plantfeber ‘518 discloses a roofing element which has a width which is not a multiple of a length of a standard roofing tile. Plantfeber ‘518 discloses, e.g., in paragraph [0028], that the roofing element depicted in Fig. 1a has a horizontal edge 12 and a vertical edge 14 which are overlapped by other roofing elements. If the roofing element of Plantfeber ‘518 were to

be used in place of plural standard roofing tiles, the overall width of the roofing element would be equal to:

(the width of the standard roofing tile minus the width of the overlap portion) x
(the number of standard roofing tiles being replaced) +
(the width of the overlap portion).

In addition, there is no disclosure in Plantfeber '518 which would suggest that the ratio of the width of the reveal portion of the standard tiles to the width of the overlap portion would be an integer, and that the Plantfeber '518 roofing element would have a shape of a number of overlapped tiles which is one fewer than the ratio of the width of the reveal portion of the standard tiles to the width of the overlap portion, which would be necessary in order for the roofing element to have a width which is a multiple of a length of the standard roofing tile. The same points apply equally with regard to the transverse dimension (depth) of the respective tiles.

In addition, it is respectfully noted that the statement in the last sentence of page 3 of the Office Action that "[t]he roofing element [of Plantfeber '518] has the *dimensions* of a plurality of roofing tiles (Abstract)" [emphasis added] is inaccurate. Actually, the Abstract of Plantfeber '518 states that the roofing element has the *shape* of a plurality of roofing tiles *overlappingly arranged relative to each other.*" Again, the same points apply equally with regard to the transverse dimension (depth) of the respective tiles.

In view of the above, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

Claims 11, 12, 14 and 15 were rejected under 35 U.S.C. §103(a) over WO '184 in view of Plantfeber '518, further in view of U.S. Patent No. 6,336,304 (Mimura '304).

Mimura '304 is relied on in the Office Action for alleged disclosure of a retaining clip. Any such disclosure in Mimura '304 would not overcome the shortcomings of WO '184 and Plantfeber '518 as attempted to be applied against claims 4 and 8, from which claims 11, 12, 14 and 15 each ultimately depend. Accordingly, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

Claims 13 and 16 were rejected under 35 U.S.C. §103(a) over WO '184 in view of Plantfeber '518, further in view of U.S. Patent No. 5,590,495 (Bressler '495).

Bressler '495 is relied on for alleged disclosure of a solar roofing system which includes photovoltaic tiles along with typical roofing tiles within the same system. Any such disclosure in Bressler '495 would not overcome the shortcomings of WO '184 and Plantfeber '518 as attempted to be applied against claims 4 and 8, from which claims 13 and 16, respectively, ultimately depend. Accordingly, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

Claims 17, 20 and 21 were rejected under 35 U.S.C. §103(a) over WO '184 in view of Bressler '495.

It is respectfully noted that the Applicants disagree with the statement in lines 3-5 from the bottom of page 6 of the Office Action, namely, that the left side of Figure 2 of WO '184 is engageable to side 21 of the standard roofing tile depicted in Figure 2 of the present application, and that the right side of Figure 2 of WO '184 is engageable to a side 22 of the standard roofing tile depicted in Figure 2 of the present application. For example, the left upright portion 25 of the tile depicted in Fig. 2 of the present application would appear to be situated to the left of the two semi-circular ridges formed in the underside of the right overhang edge of the tile depicted in WO '184. If, from such an orientation, the tile according to Fig. 2 of the present application were moved to the right, the upright portion 25

would not interact with either of the semi-circular grooves, i.e., the upper extremity of the upright portion 25 would be situated lower than the semi-circular grooves.

In addition, it is respectfully submitted that the end portions of the photovoltaic tiles depicted in Figs 5b and 5c of Bressler '495 are not engaged with the end portions of the standard tiles. Referring to Figs. 5b and 5c of Bressler '495, in the second through fifth courses, the region between the left-most tile (standard tile) and the tile to the immediate right (solar tile) shows a pair of lines, whereas the region between solar tiles (i.e., the second through the seventh tile from the left in each course) shows only a single line, indicating that the solar tiles overlap one another. It is submitted that the pair of lines between the standard tiles and the solar tiles indicate that the non-solar tiles are not in overlapping relationship with the solar tiles, and instead the modules 58, 60, 62 and 63 are merely "*surrounded* by a boundary of non-photovoltaic shingles 142" [emphasis added] (Bressler '495, column 7, lines 65-67).

Accordingly, no combination of the applied references would achieve a method or system in which a first end portion of a first frame which holds a photovoltaic element is engaged with a first side portion of a roofing tile. Therefore, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

Claims 18 and 19 were rejected under 35 U.S.C. §103(a) over WO '184 in view of Bressler '495, further in view of Mimura '304. Mimura '304 is relied on in the Office Action for alleged disclosure of a retaining clip. Any such disclosure in Mimura '304 would not overcome the shortcomings of WO '184 and Bressler '495 as attempted to be applied against claim 17, from which claims 18 and 19 each ultimately depend. Accordingly, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

Claims 22, 24 and 25 were rejected under 35 U.S.C. §103(a) over WO '184 in view of Mimura '304.

As noted above, claim 22 has been canceled. Claim 24 has been amended as set forth above to recite that the first underhang element is substantially parallel to a surface of the frame. Mimura '304 does not disclose or suggest a device which includes an underhang portion which *consists of* a first underhang element and a second underhang element, wherein the second underhang element extends from the frame to the first underhang element, and wherein the first underhang element is substantially parallel to a surface of the frame. Such an arrangement is very beneficial in the context of the present invention, in order to permit the retaining clip according to the present invention to easily slide relative to the underhang portion in the devices according to the present invention.

Claim 25 has been amended to recite that the retaining clip *consists of* a roof engaging portion, a transition portion and an underhang engaging portion, each of which is substantially flat. Mimura '304 does not disclose or suggest any device which includes a retaining clip which consists of three substantially flat portions.

In view of the above, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

Claims 26-29 were rejected under 35 U.S.C. §103(a) over WO '184 in view of Bressler '495, further in view of Mimura '304.

As noted above, the Applicants disagree with the statement in lines 3-5 from the bottom of page 6 of the Office Action, namely, that the left side of Figure 2 of WO '184 is engageable to side 21 of the standard roofing tile depicted in Figure 2 of the present application, and that the right side of Figure 2 of WO '184 is engageable to a side 22 of the standard roofing tile depicted in Figure 2 of the present application.

In addition, as noted above, it is respectfully submitted that the end portions of the photovoltaic tiles depicted in Figs 5b and 5c of Bressler '495 are not engaged with the end portions of the standard tiles. As noted above, referring to Figs. 5b and 5c of Bressler '495, it is submitted that the single line between pairs of solar tiles indicate that the solar tiles overlap one another, and the double lines between the solar tiles and the non-solar tiles indicate that the non-solar tiles are not in overlapping relationship with the solar tiles.

Accordingly, no combination of the applied references would achieve a method or system in which a first end portion of a first frame which holds a photovoltaic element is engaged with a first side portion of a roofing tile. Therefore, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

In addition, claim 28 recites that the first underhang element is substantially parallel to a surface of the frame. Mimura '304 does not disclose or suggest a device which includes an underhang portion which *consists of* a first underhang element and a second underhang element, wherein the second underhang element extends from the frame to the first underhang element, and wherein the first underhang element is substantially parallel to a surface of the frame.

In addition, claim 29 recites that the retaining clip *consists of* a roof engaging portion, a transition portion and an underhang engaging portion, each of which is substantially flat. Mimura '304 does not disclose or suggest any device which includes a retaining clip which consists of three substantially flat portions.

In view of the above, it is respectfully requested that the U.S. PTO reconsider and withdraw this rejection.

The Applicants appreciate the indication that claim 23 is allowed.

In view of the above, favorable consideration of claims 1, 3-6, 8, 9, 11-21 and 23-29 is respectfully requested.

If the Examiner believes that contact with Applicant's attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicant's attorney at the phone number noted below.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,



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